The Kentucky P-16 Council has endorsed an integrated statewide P-16 data system. Such a system would track an array of information about students—including, but not limited to, demographics, course-taking patterns, grades and levels of achievement, and instructors—as students progress from pre-school through the postsecondary sector. These data would have three broad types of use: 1) better decision-making regarding placement, intervention, and supplemental services based on student records as students progress through each grade and level; 2) accountability options extending beyond the data reach of individual agencies (such as monitoring the progress of students from the K-12 through the postsecondary education, and examining the effect of teacher preparation programs on K-12 student learning); and 3) research-based policy-making, through access to large, integrated databases, to determine which educational programs, policies, decisions, and resources have the optimal impact on both student learning and organizational and institutional efficiency.

The Kentucky Department of Education, the Education Professional Standards Board, and the Council on Postsecondary Education have been working as agencies and cross-agency to develop such an integrated data system. The Kentucky Instructional Data System project, which recently received funding through a $5.8 million federal grant, represents the P-12 portion of this project and focuses on public school students. The KDE, the EPSB, and the CPE are stakeholders in this project. Representatives of the three agencies also are collaborating with the long-term goal of sharing portions of their data collections in an integrated warehouse. In January, they submitted a joint budget proposal through the Education Cabinet for an independent data repository to be shared for research assessment and accountability reporting purposes which will allow analysis across educational agencies. The Kentucky Higher Education Assistance Authority also is a stakeholder, whose financial aid and outreach initiatives require data matching. A mechanism must be created to identify and resolve the data sharing issues that will inevitably arise.

The partner agencies will need to address and find agreement on several logistical and policy issues for an integrated P-16 data system to be established and effective:

- Mechanism for Cross-Agency Data System Collaboration: Each agency is improving its own data system but there has not yet been created a forum for ensuring that these efforts are compatible with the vision of an integrated P-16 data system or that such an integrated, multi-agency data system can be maintained and can function effectively.

- Data Ownership and Warehousing: An "integrated" P-16 data system is, in fact, a "distributed" one, in that each of the participating agencies has its own databases that are linked via Web-based software and computer networking arrangements that will be largely invisible to users. Given that each agency "owns" the data it collects, manages, and relies upon for reporting and accountability purposes, the three agencies must reach agreements for

sharing this information for such a distributed, transparent system to function. These agreements must specify where data reside and the data to be warehoused, how such information will be maintained and accessed, and when and how it will be updated, how the costs for warehousing data will be borne, and procedures for assuring the quality and accuracy of the data.

- Software Protocols: Similarly, agencies must agree on software protocols such that data development in each unit will be compatible with that in all others. To the greatest extent possible, these protocols should allow individual agencies maximum leeway to organize their internal data efforts as they deem appropriate. At the same time, one agency's protocols should not dominate those of the others.

- Individual Student Identifier: For demographic, academic, and other information about individual students to accumulate over time, each individual in the system must have a unique identifier number that remains constant across sectors. During the current academic year (2005-06), the KDE is, for the first time, assigning a unique identifier to P-12 students in public schools. Some mechanism will need to be developed for the unique identifier to be used as students enter postsecondary institutions, by the CPE, KHEAA, and other agencies. In addition to the technical issues that must be overcome for this to take place, unique student identifiers will be needed by a large number of students who come to Kentucky from out-of-state, GED-earners, students who graduated before the KDE unique student identifiers were implemented, and those who are home-schooled. Currently the only way all of these records can be linked is through use of social security numbers.

- Security and Student Confidentiality: The great promise of an integrated P-16 data system lies at least partly in the ability of numerous skilled investigators to analyze large data sets that can be created out of the system and to report on the relationships they find among the factors that influence student performance over time. This must be accomplished, however, by people inside and outside of state agencies within the confines of laws and regulations governing the privacy of those whose information is collected in the system. The Family Educational Rights and Privacy Act and its corresponding Kentucky statute require extensive safeguards before data could be linked between the P-12, postsecondary, and other agencies. Consequently, ensuring compliance with FERPA and KFERPA will be one of the more complicated components to this project. A warehouse with strong security protocols, where data could be brought together to link student performance at all levels with teacher preparation data, for example, and then de-identified in a manner that protects student confidentiality and meets FERPA and KFERPA requirements, is the only way this can be completed. The partner agencies will have to create coherent internal and external policies for dealing with these concerns in a manner that nevertheless allows data to be used for a variety of legitimate purposes. Current policies prohibit sharing of agency data with third parties under most, if not all, circumstances. Still, evaluation of these data by outside researchers is a highly desirable function, and some mechanism must be developed to make data available to legitimate researchers, without undue administrative delay and consistent with federal and state laws protecting the confidentiality of personally identifiable student information. Data will often have to be redacted for this purpose, and there must be a systemwide agreement on which data must be redacted, and under what rules.

In addition to the above issues that directly challenge an integrated P-16 data system in Kentucky, all three partner agencies require significant upgrades and updates to their individual systems in order to participate in the P-16 data warehouse.